UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

December 20, 2006

Reply To
Mail Code: 6WQ-SG

MEMORANDUM

Subject: NTW work product #10: Drinking Water Treatment Residual Injection Wells *Technical Recommendations*

From: Mike Frazier, Region 6, NTW Chair
Steve Platt, Region 3, NTW Co-Chair

Thru: Ann Codrington, Chief
Prevention Program, Drinking Water Protection Division, 4606M

To: Steven F. Heare, Director
Drinking Water Protection Division, 4606M

Please find attached for your review and approval the recently completed work product of the Underground Injection Control (UIC) National Technical Workgroup (NTW) entitled, Drinking Water Treatment Residual Injection Wells *Technical Recommendations*.

This work product completes the NTW assignment authorized through your office on April 21, 2006, as NTW Project Topic # 2006-1 and initially titled: Comparison of UIC Technical Requirements and Costs for Class I and Class V Drinking Water Treatment Residuals Disposal Wells. The report contains an executive summary that outlines specific recommendations for your consideration, including additional data collection, capacity building for small operators, and development of an implementation strategy for work product recommendations.

If you have any questions concerning this work product, please contact the principle authors: Kurt Hildebrandt in Region 7 at (914)551-7413 or Suzanne Kelly in Headquarters at (202)564-3887. A duplicate email transmittal precedes this paper communication.

The entire NTW membership is very proud of this product and congratulates the authors on a "job well done!"

Attachment (1)
cc: UIC Regional Managers w/o attachment

UIC NATIONAL TECHNICAL WORKGROUP
PRODUCT COVER SHEET ISSUE # 10

1. Title: **Drinking Water Treatment Residual Injection Wells *Technical Recommendations***

2. Date of Finalization: **December 20, 2006**

3. Background/Brief Reason for its Need:

Public water systems (PWSs) increasingly rely on reverse osmosis (RO) and other membrane technologies to meet new drinking water treatment standards and to utilize brackish aquifers previously considered too costly to treat. These technologies generate concentrated residuals containing radionuclides, arsenic, and other desalination-related wastes that require both economic and environmentally friendly disposal methods. Underground injection is one option that is emerging as the preferred disposal method for these residual wastes.

DWTR disposal wells are typically authorized by an Underground Injection Control (UIC) Program as Class I injection wells but could be authorized as a Class V injection activity as long as the disposed residuals are classified as non-hazardous under the Resource Conservation and Recovery Act (RCRA) and the injection activity is protective of underground sources of drinking water. In both EPA and State administered UIC programs, Class V disposal wells are currently being used or are being considered for DWTR disposal. Due to limited financial resources, PWSs would prefer to use Class V wells instead of Class I wells which are typically more expensive to construct, operate and monitor.

EPA's UIC management requested that the UIC National Technical Workgroup (NTW) investigate the technical aspects of underground injection of Drinking Water Treatment Residuals (DWTR). Specifically, the NTW was asked to:

1. **Outline the differences in existing UIC Program requirements for Class I Non-Hazardous and Class V wells receiving DWTR,**
2. **Propose minimum construction, operation, and monitoring criteria for both well classes to ensure protection of underground sources of drinking water, and**
3. **Estimate the costs associated with these criteria.**

4. Author(s):

Kurt Hildebrandt, EPA Region 7
Suzanne Kelly, EPA Headquarters
Brian Graves, EPA Region 6
Mike Cochran, Kansas Department of Health and Environment
Russ Land, Nevada Division of Environmental Protection

5. Background Information Location (where the supporting documents are):

Supporting documentation rests in EPA Headquarters. Contact Suzanne Kelly at (202) 564-3887